SOFTWARE REQUIREMENT SPECIFICATION FOR MEDITRACK [21-11-2020] CDAC, MUMBAI

Revision History:

Version.	DATE	Authored By	Reviewed By	REASON FOR CHANGE
00	21/11/2020	Team-09		1st release

Table of Contents

1. Introduction

1.1 Purpose

Meditrack will be a Web app to help people with their medicine and doctors' routine.
It will store all the medications prescribed by receptionist and help to maintain the stock. It provides an interface through which user can track the Medicines and can schedule the appointment. If the user is not at its home location and wants the medicine then user can track the nearest chemist location. Our Meditrack app makes it easy to set up all aspects of user's treatment. Our mission is to simplify your treatment plan no matter how complex it is and to make it possible for you to take control of your own health.

1.2 Document Convention

Headings: -
Text: -Bold
Font-Size: - 14
Highlighting: - Times New Roman

Sub Headings: -
Text: -Bold
Font-Size: - 12
Highlighting: - Times New Roman

Header: -
Text: - Simple
Font-Size: -10
Highlighting: - Times New Roman

Footer: -
Text: - Simple
Font-Size: -10
Highlighting: - Times New Roman

Intended Audience and Reading Suggestions

This document is intended for developers, users, testers and project managers for the purpose of understanding the design of system in terms of different perspectives. Further, this document contains functionalities and characteristics of system along with the working

environment. It also includes other information related to system such as external interface requirements, features and other non - functional requirements.

1.2 Product Scope

Our project is targeted to reduce the cumbersome process of consulting doctors, chemist maintaining track of the medicines as well as the scheduled appointment of the user with the doctors through receptionist. The Admin can validate user

1.3 References

https://angular.io/
https://material.angularjs.org/latest/
https://stackoverflow.com/
https://expressjs.com/
https://nodejs.org/en/
https://spring.io/
https://spring.io/projects/spring-boot
https://www.oracle.com/in/java/
http://tomcat.apache.org/

2. Overall Description

2.1 Product Perspective

In today's busy schedule, we often tend to forget the most important things of our life, that is taking care of our health. When it comes to health, a big part of it is dealt by our medicines.

Our application intends to make it easier for the users by handling a few of the most responsible things regarding medicines. Anybody who would like to get relieved of the headache of remembering and counting medicines every alternate day should use this app.

It will help not just in maintaining stocks but will also show nearby shops' locations where the medicine might be available.

If the patient is sort of medicine he can make a search of that medicine in his nearest locality with the help of GPRS.

2.2 Product Functions

- The Patient will able to track of medicines.
- Patient & receptionist can access the Appointment details.
- Maintain track of the stock of required medicines.
- Scheduled reminders at appropriate times for prescribed medicines.
- List the nearest chemist shops locations.

2.3 User Classes and Characteristics

Admin:

This person will be able to access all the functions of the system. This person can validate Patient, Receptionist and update them.

Patient:

Patient can choose any particular appointment given by receptionist. Patient can also get the notification of medication refilled if his/her dose is running out. Patient also get the chemist location if he/she is not in his/her location to get the medicine if he/she is running out.

Receptionist:

This person schedule patient's appointment according to doctor availability.

2.4 Operating Environment

- **Hardware platform:**
  - Processor – Above Pentium 4, with clock speed of 2.0 GHz
  - RAM – 1 GB or above
  - Hard Disk – Free disk space of above 1 GB
- **Software platform:**
  - Front-end: HTML, CSS, Java Script, Bootstrap, Angular, Angular Material
  - Back-end: MySQL, Spring, Hibernate
- **Supported tools:**
  - Eclipse, VS Code, MySQL Workbench

2.5 Design and Implementation Constraints

Constraints:

- User interface is only in English. No other language option is available
- User can log-in only with his assigned user-name and password
- Limited to HTTP/HTTPS

2.6 User Documentation

User documentation mainly comprises of Help menu of application. It will give all the minute details about the project, if any user has any query about any module or functionality, one can refer it and see how to operate the application. This report is the complete documentation of our project. It gives complete details about the project, its functionality, users, software used, hardware requirement, environment and so on.

2.7 Assumptions and Dependencies

- Assumptions
  - There is an active internet connection with the system
  - The system has internet browser installed
  - Users know the English language, as the user interface will be provided in English.

- Dependencies:
  - There is a need of constant updating of medicine dosage and appointment
  - Active participation from Patient during feedback is required.
  - Active participation from Receptionist is required.

3. External Interface Requirements

3.1 User Interfaces

The main element is web-pages using HTML, Angular Material. Multiple interfaces are there like log-in pages, home pages of User, Admin, Receptionist, and user can get notification if the medicine are about to

3.2 Hardware Interfaces

In the hardware interface, the system interacts with hardware given the processor is above P4 with clock speed of 2.0 GHz with 1 GB RAM and the Hard Disk with 1 GB free space in the memory. In future enhancements, it can be made responsive to be able to work with mobile devices as well.

3.3 Software Interfaces

In software interfaces, Spring is the back-end technology used along with MySQL Database. The front-end technologies include HTML, CSS, Bootstrap, Angular and Angular Material. Data will be communicated between these interfaces accordingly.

3.4 Communications Interfaces

The main communication interface for interacting with the System will be the web Browser.

4. System Features

4.1 Description

This system will help to assist people in reminding them about medicines, tracking their current stock of the required medicines, getting the location of the nearest chemist shop and scheduling appointments at the nearest clinic.

4.2 Functional Requirements

4.2.1 Forum

- The system will allow receptionist to see the description of patient.
- The system will show the patient to their medical report/stock of medicines.
- The system will give remainder to patient within particular duration.
- The receptionist will remind patient about appointment if in case they forgot.

4.2.2 Doctor Appointment

- The patient will be able to request an appointment and receptionist will give dates to patients through which patient can select anyone date also patient can cancel the appointment.

4.2.3 Refill Remainder

- The system Have the ability to get reminded every X amount of days to get patient medication refilled.
- The system will Get alerted after patient's "dose on hand" is coming close to running out.

4.2.4 Chemist location

- Search the nearest chemist shops' locations.

5. Performance Requirements

The system should store all the database records of each patients, receptionist and admin staff properly and the application should be available for use 24*7 through the server. Also, the application should be user friendly with a proper user interface which makes it easy for the user to understand. All the options should be present in properly accessible places for user convenience.

5.1 Safety Requirements

All login ids and passwords of the patient, Receptionist and especially admin staff should be protected for privacy using whatever constraints required in the database or the application. In case any admin staff access account is hacked by any intruder, user id and passwords of all the

admin staff personnel should be changed and new passwords should be issued to all patients. Patients and Receptionist records are to be backed up securely across database servers. Incase database is hacked by someone and data is deleted a backup server should be present for such purpose.

5.2 Security Requirements

All passwords of the administrators should be protected for privacy using whatever constraints required in the database or the application. Only admin staff will have access rights to the Patient and Receptionist data. The database should be protected from attacks and unauthorized access. The interface should be protected from attacks. All passwords should be stored as a secure hash of the administrator password.

5.3 Software Quality Attributes

5.3.1 Availability

The system should run on a variety of operating systems that support the JavaScript language. The system should run on a variety of hardware.

5.3.2 Accessibility

The software will be accessible to admin, patient and receptionist.

5.3.3 Compatibility

The software will be compatible with multiple platforms.

5.3.4 Durability

The software will be tested for working with multiple users.

5.3.5 Effectiveness

The software will be made to handle operations effectively.

5.3.6 Maintainability

The system should be easy to maintain. There should be a clear separation between the interface and the business logic code. There should be a clear separation between the data access objects that map the database and the business logic code.

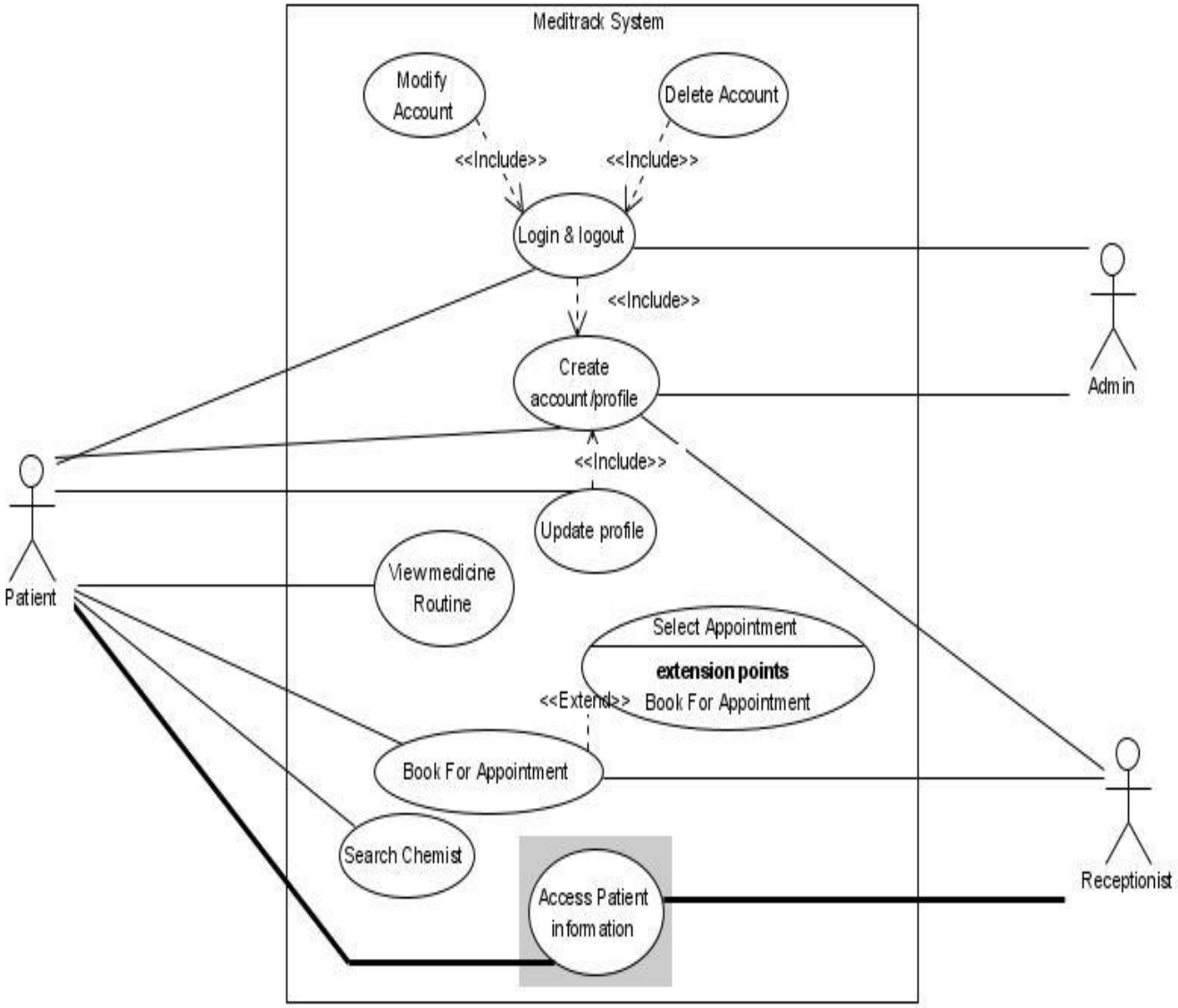
6.Other Requirements

➢ Appendix A: Glossary

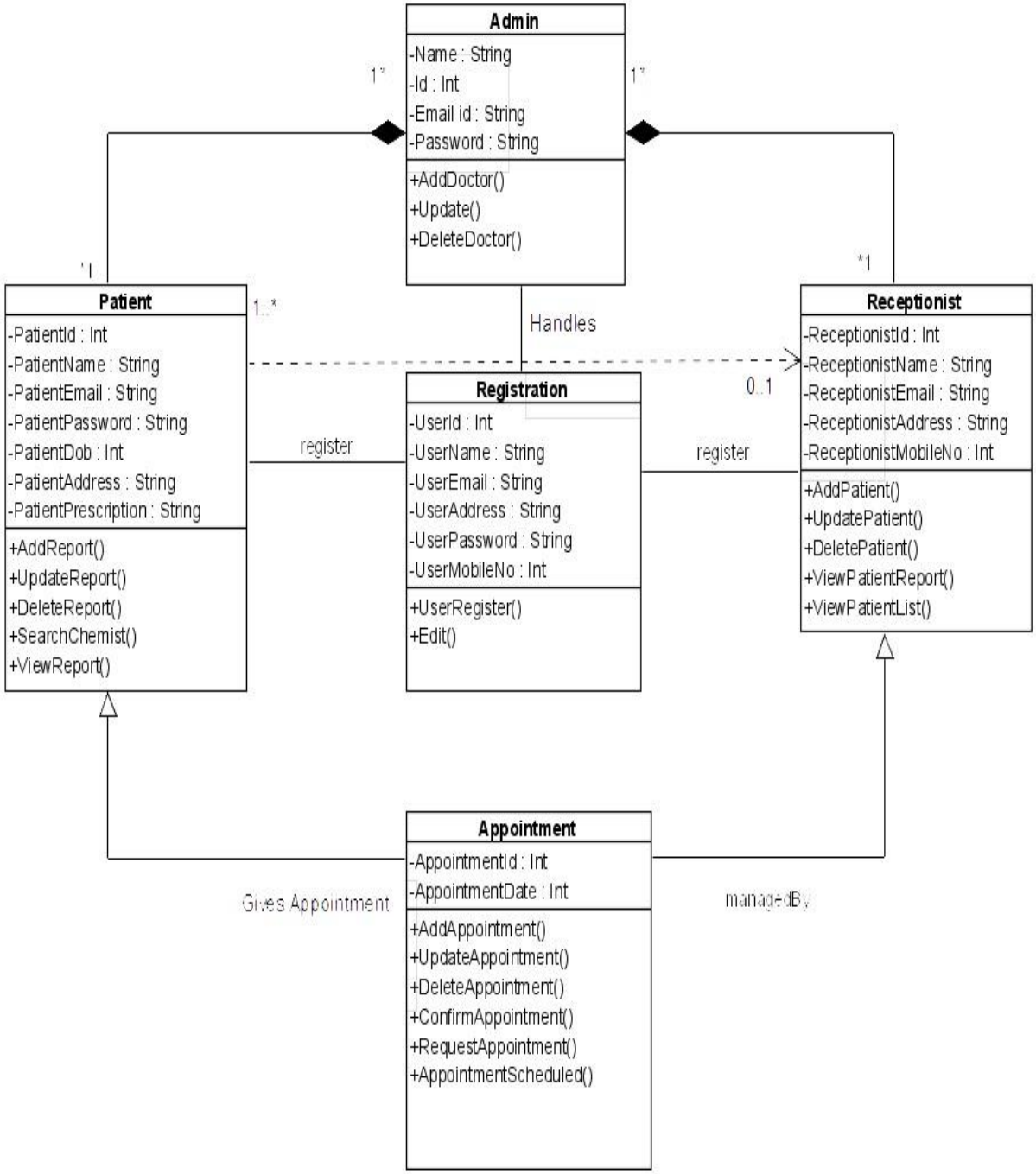
- **SRS:** Software Requirement Specification
- **GUI:** Graphical User Interface
- **P4:** Pentium 4
- **SQL:** Structured Query Language
- **HTML:** Hyper Text Markup Language
- **CSS:** Cascading Style Sheet

Appendix B: Analysis Models

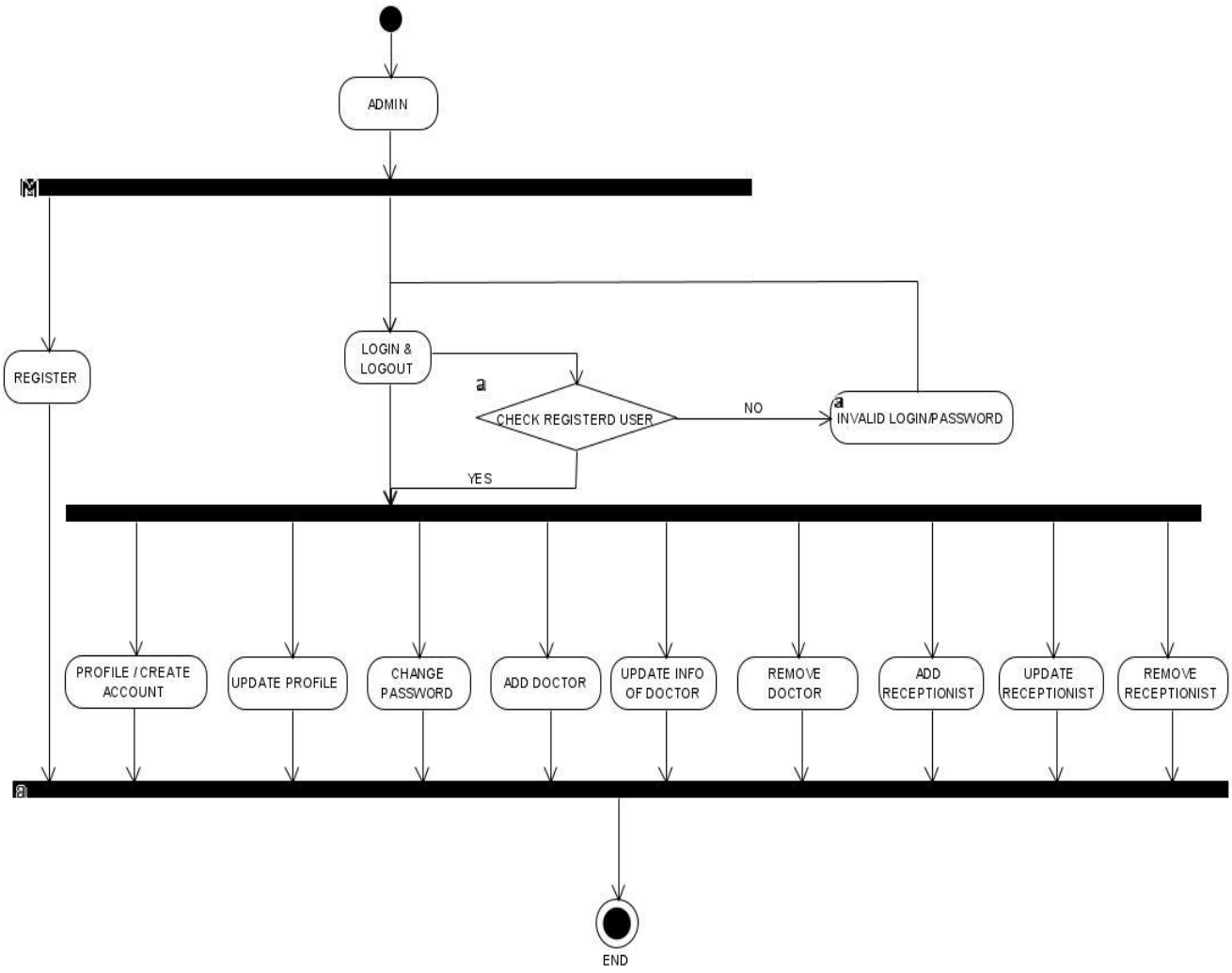
a) Use Case Diagram



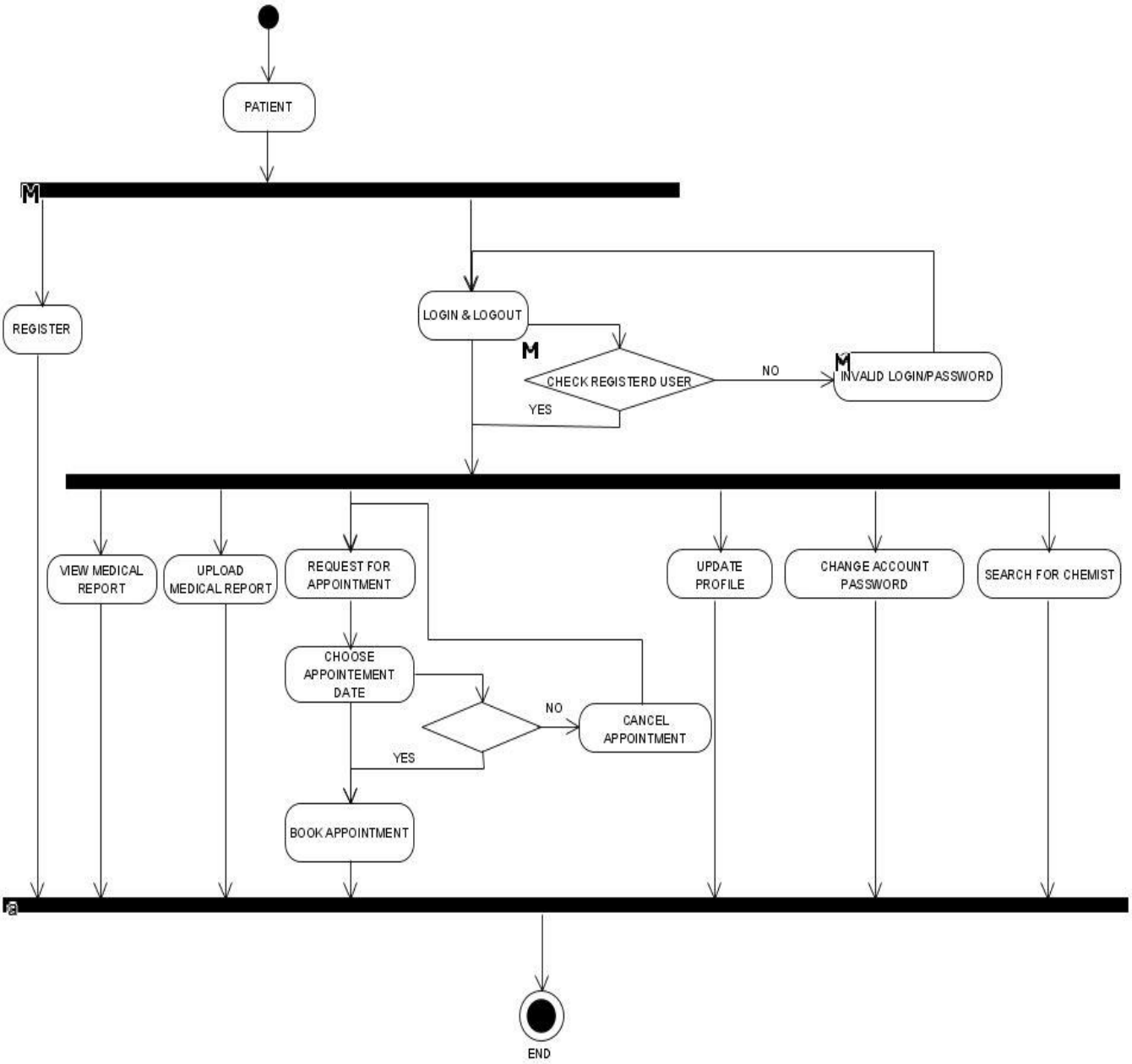
b) Class Diagram



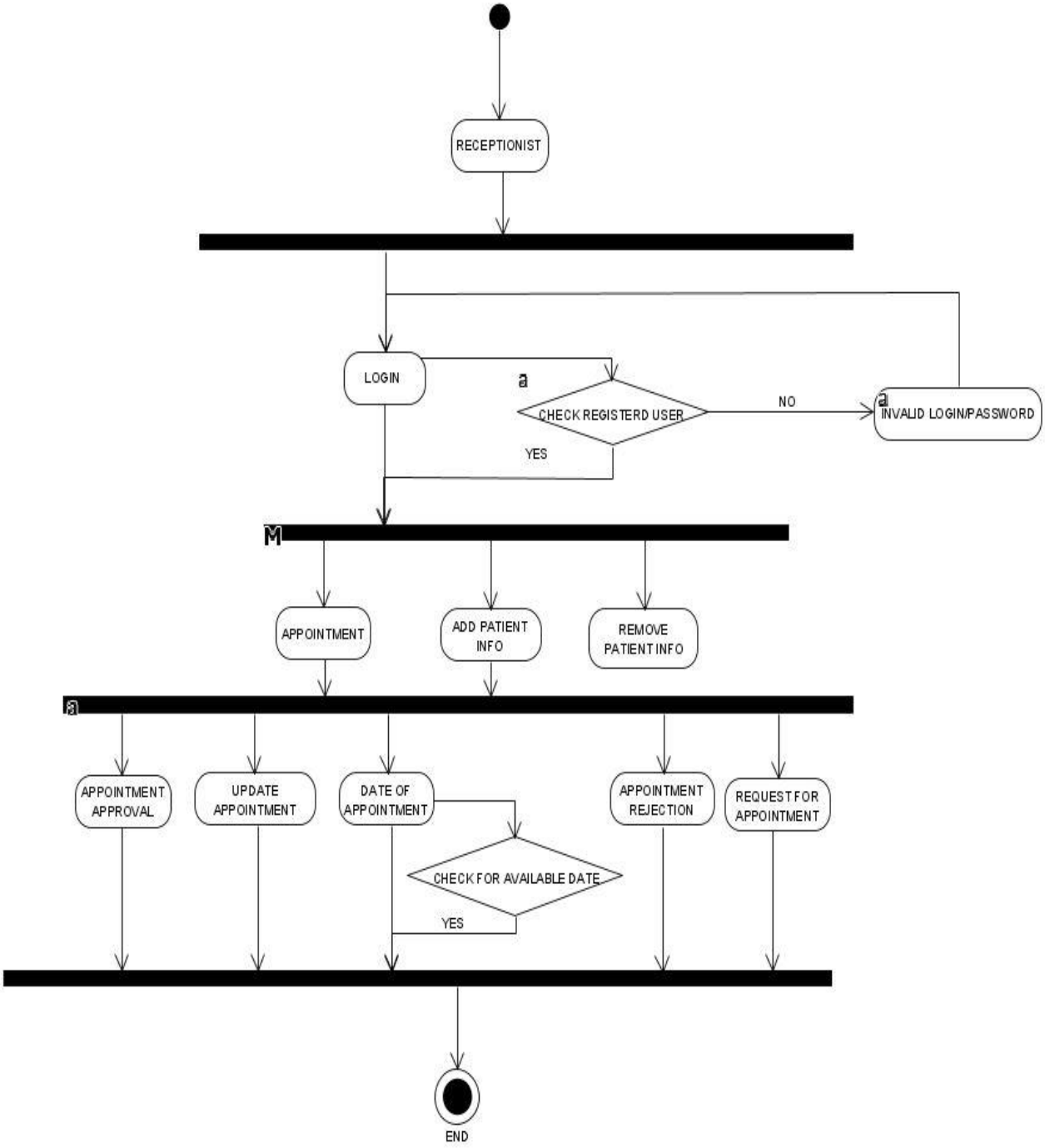
c) Activity Diagram 1.1: Admin



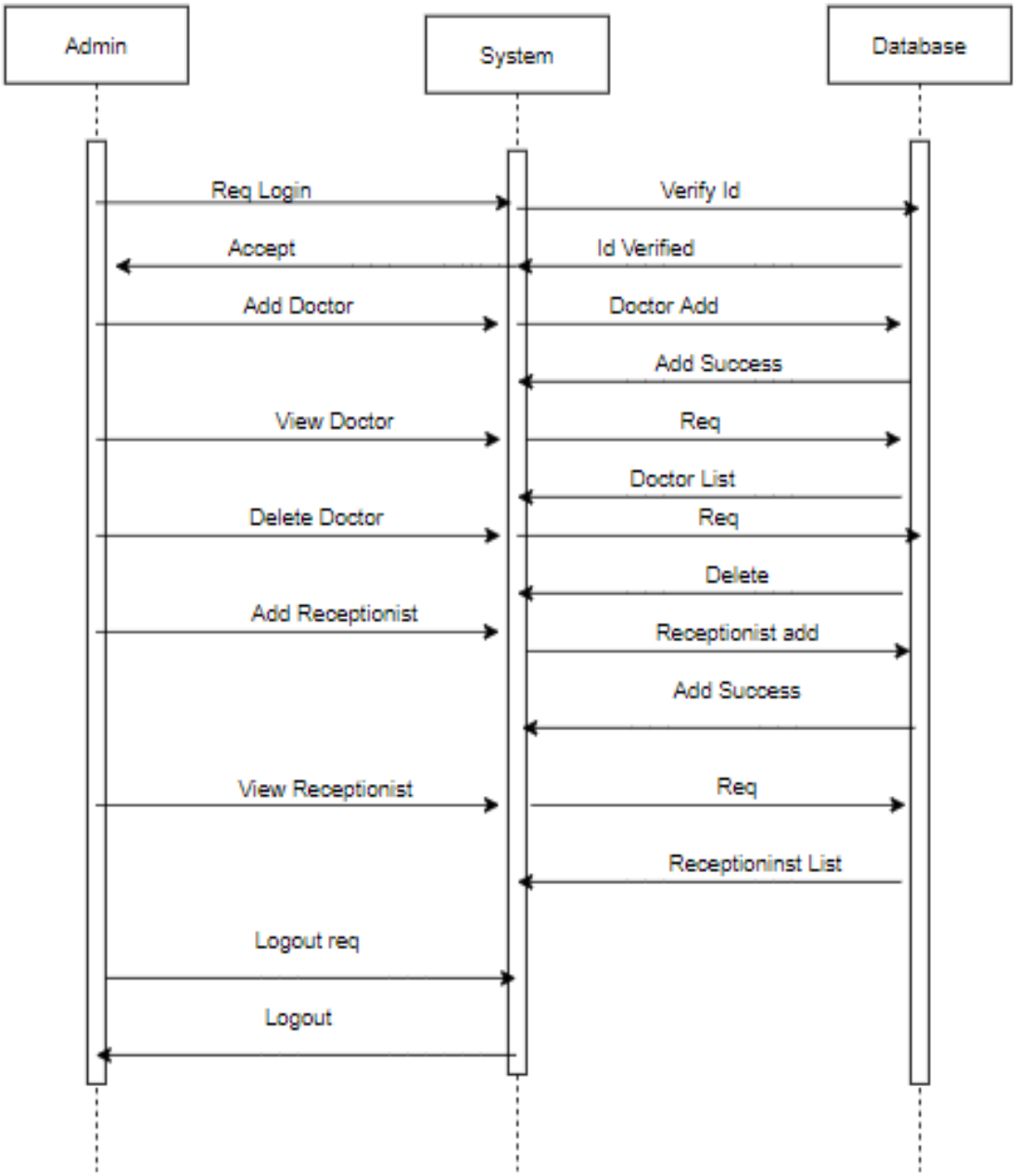
Activity Diagram 1.2: Patient



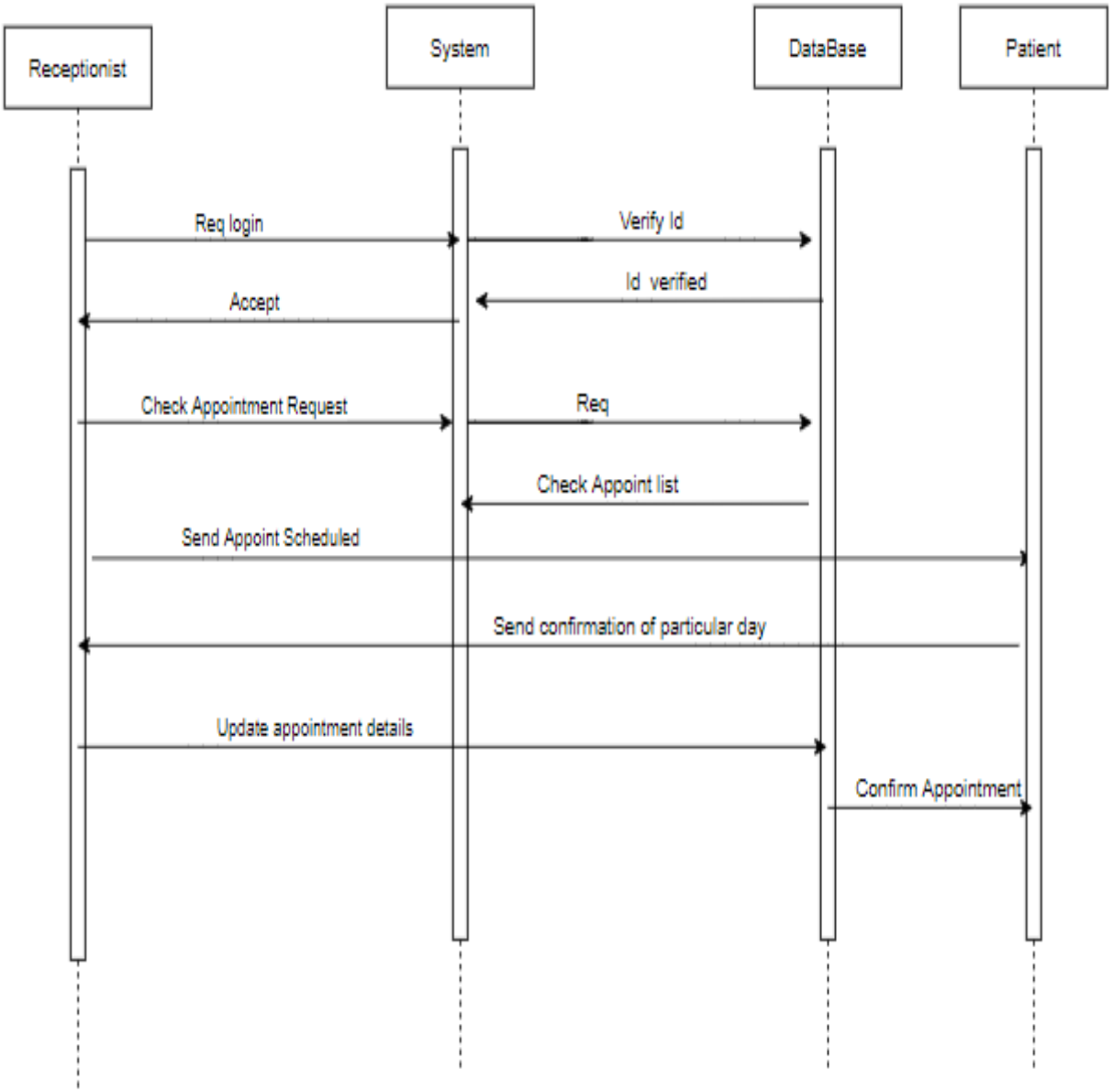
Activity Diagram 1.3: Receptionist



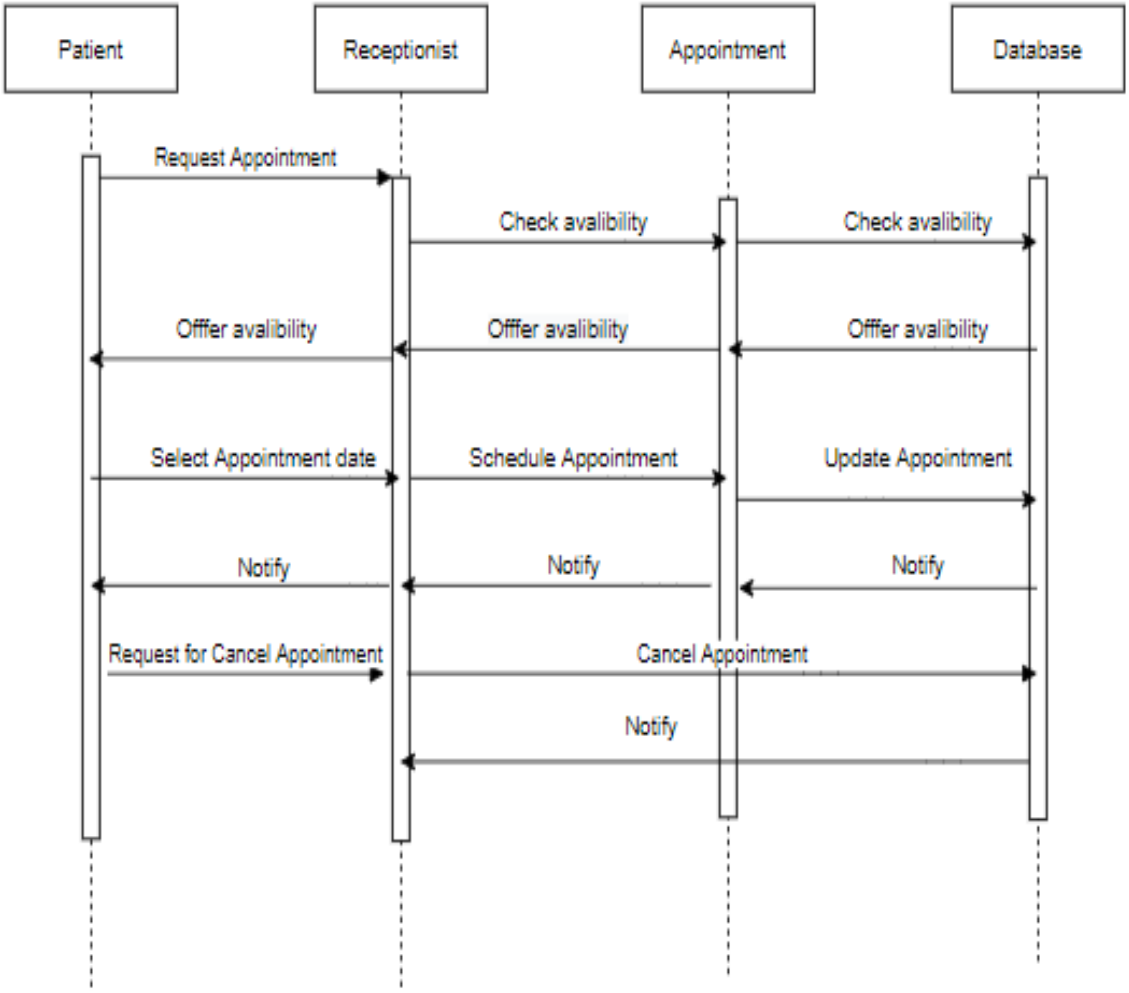
d. Sequence Diagram 1.1: Admin



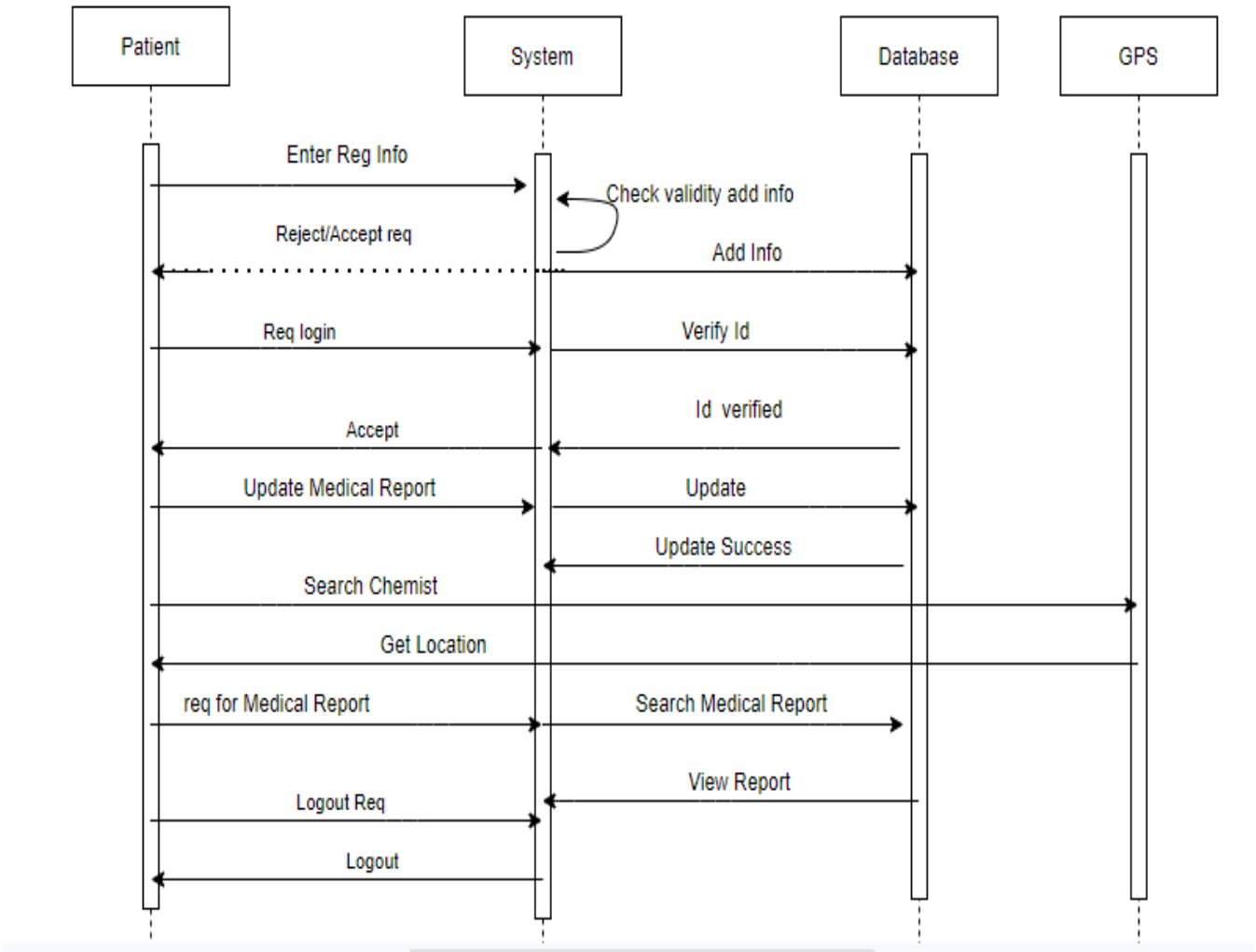
Sequence Diagram 1.2: Patient Registration



Sequence Diagram 1.3: Patient Appointment



Sequence Diagram 1.4: Receptionist



Task Report -

Task Name	Done	Assigned To	RollNo	Date
External Interface Requirement	☑			
System Features/Report Editing &	☑			
Other Non-functional Requiremen	☑	All Members		11/18/20
Overall Description	☑			
Use-Case Diagram	☑	Shubham Nikam	200240320114	11/19/20
Class Diagram	☑	Subham Singh	200240320123	11/19/20
Sequence Diagram	☑	Rupali Pangare	200240320094	11/20/20
Activity Diagram	☑	SIddhesh Bhavsar	200240320121	
	☑	Nikhil Deshpande	200240320069	11/20/20